

## CLIMATOLOGICAL DATA FOR MARCH, 1912.

## DISTRICT NO. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

## GENERAL SUMMARY.

Unseasonably cold weather prevailed, except that there was a warm period from 16th to 18th over the western, and from the 18th to 20th over the eastern and southern portions of the district. On the 13th and 15th freezing temperatures were recorded southward as far as Lake Charles, La. Precipitation was well distributed, showers occurring in all parts of the district every day, except that from the 16th to 22d many stations received no rain.

States and portions of States lying within District No. 7.	Mean temperature.	Departure from normal.	Mean precipitation.	Departure from normal.	Greatest precipitation in 24 hours.	Mean snowfall.	Number of days.			Prevailing wind direction.
							With 0.01 inch or more.	Clear.	Partly cloudy.	
Colorado.....	30.1	- 6.8	1.74	+0.03	2.16	23.2	10	11	9	w.
New Mexico.....	38.3	- 5.9	0.75	+0.13	1.06	6.2	5	11	11	sw.
Texas.....	42.9	- 8.0	2.90	+1.45	2.25	4.8	7	9	5	17
Kansas.....	33.9	- 10.3	2.61	+1.29	1.98	13.4	8	9	7	15
Oklahoma.....	41.7	- 10.3	3.62	+1.51	3.20	1.8	9	10	4	17
Missouri.....	39.6	- 8.6	4.99	+1.07	1.90	7.6	12	10	5	18
Tennessee.....	44.2	- 7.1	7.71	+2.76	2.91	0.7	13	10	3	18
Arkansas.....	45.8	- 7.0	7.86	+2.78	3.45	0.5	12	7	7	17
Mississippi.....	50.9	- 6.0	10.89	+4.05	4.05	T.	14	8	6	s.
Louisiana.....	56.9	- 4.3	7.32	+2.90	5.20	T.	9	8	8	15

## TEMPERATURE.

Mean temperatures were below the normal, the departures ranging from  $-0.4^{\circ}$  to  $-11.1^{\circ}$ , and in portions of the district, particularly in the Kansas area, the month was the coldest March of record. The highest temperature recorded was  $96^{\circ}$  at Weatherford, Okla., and the lowest  $-10^{\circ}$ , at Limon, Colo.

## PRECIPITATION BY DRAINAGE AREAS.

*Arkansas River and tributaries.*—Unusually heavy precipitation occurred over the portions of this drainage area east of the ninety-seventh meridian. Over the headwaters of the Arkansas River, in Colorado, the average from 39 stations was 1.78 inches, about the normal amount. Over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma the average from 44 stations was 2.81 inches, about 1.2 inches above the normal. The amount from 40 stations in the part of the Canadian Valley that lies in New Mexico averaged 0.80 inch, about 0.2 inch above the normal. The precipitation was heavier over those portions of the Canadian Valley that lie in Texas and Oklahoma, where the amounts from 33 stations averaged 2.84 inches, about 1.0 inch above the normal. In the Cimarron Valley the average from 23 stations was 1.42 inches, about half an inch above the normal. In the Verdigris Valley the average was 3.85 inches, about 1.7 inches above the nor-

mal, and in the Neosho Valley the average was 5.07 inches, about 2.5 inches above the normal. Below the Oklahoma-Arkansas line the average from 14 stations in the Arkansas Valley was 7.61 inches, about 2.7 inches above the normal.

*Red River and tributaries.*—Excessive precipitation occurred over the lower portions, and heavy local rains occurred in the upper portions of this drainage area. Over those portions of the Red River Valley that lie in New Mexico, Texas, and Oklahoma the average from 40 stations was 3.61 inches, about 1.8 inches above the normal. Below the Texas-Arkansas line the average from 20 stations was 8.66 inches, about 4.7 inches above the normal.

*Mississippi River south of St. Louis and small tributaries.*—Unusually heavy precipitation occurred over large areas of this drainage basin. In the immediate Mississippi Valley, the average from 40 stations was 7.02 inches, about 2.1 inches above the normal. The average from 22 stations in the Valley of the White was 5.60 inches, about 1 inch above the normal. Over the Yazoo Valley the average from 26 stations was 12.01 inches, about 5.8 inches above the normal. The average precipitation over the Valley of the Big Black was 8.61 inches, about 2.9 inches above the normal. The amounts from 20 stations in the Ouachita Valley averaged 10.12 inches, about 4.4 inches above the normal.

*Louisiana coastal plain.*—More than the normal precipitation occurred over this drainage area, except in scattered localities, the average from 32 stations being 6.13 inches, about 2 inches in excess of the normal.

## SNOWFALL.

Snow occurred generally to the north of a line drawn from Cairo, Ill., to Amarillo, Tex., but south of that line only light amounts occurred at scattered stations. The total amounts from the northern and western portions of the district were in many cases excessive. In the Colorado area, the weather was stormy, with unusually heavy snowfall, except in the northern portion of the area. Over much of the area the snowfall of March was as great as the total for the three preceding months. In the upper reaches of the Arkansas the fall was below the normal, but southward to the Greenhorn, Sangre de Cristo, and Culebra ranges, the fall was remarkably heavy. Large drifts are common, and in general the snow contains a large percentage of moisture. While the snow is fairly well packed, there is an absence of layers of crust, and the melting will for this reason be rapid. For the Arkansas watershed, at a mean elevation of 9,400 feet, the average depth on the ground at the close of the month was 25 inches, being 9 inches greater than at the same time in 1911. In the New Mexico area the snowfall was especially heavy over the western ranges, exceeding 100 inches near the crest of the Sangre de Cristo Range in Taos County. This deep snow added greatly to the

stored depth, and conditions favorable for a good flow for irrigation purposes prevailed at the close of the month, except that the eastern counties are still too dry, due to the lack of precipitation earlier in the winter. In the Kansas area snow fell to a depth of 2 to 2½ feet, and occurring mostly on the 23d and 24th, seriously interfered with outdoor work and transportation interests. Over the Missouri area the snows were frequent, and in the Ozark Mountains it was heavy, the amounts ranging from 8 to 15 inches. In parts of the Meramec watershed 40 inches occurred. Over Oklahoma the snowfall was unusually heavy for the time of the season. Generally speaking, snowfall conditions in the mountains of the Colorado and New Mexico areas are satisfactory.

#### RIVERS.

No floods occurred in the Arkansas proper, but some of the tributaries in Oklahoma, Kansas, and Arkansas overflowed their banks. The lower Arkansas was at a navigable stage throughout the month.

The White River was falling until near the close of the month, when a sharp rise set in, and the river was rising at all stations at the close of the month.

High water prevailed in the Yazoo Valley.

The Red River rose during the first decade, fell during the second decade, and rose again during the third decade, but no flood stages occurred.

The Mississippi rose during the month and flood stages were reached as follows: Memphis, 33.8 feet on the 24th; Helena, 42 feet on the 26th; and Arkansas City, 47.2 feet on the 29th.

#### ABNORMAL SNOWFALL AT SPRINGFIELD, MO.

By JOHN S. HAZEN, Local Forecaster.

For total amount and number of days with snow on the ground the season of 1911-12 breaks all records at this station. The first snow occurred on October 20, 1911, and since that time the total amount has been 53.1 inches. The average annual snowfall for the last 25 years is about 15 inches. During January, 1912, the ground was covered with snow for 24 days, and on the date of writing, March 21, 1912, there is still snow on the ground. Snowfall occurred on 41 days, and on February 20 a depth of 20 inches was recorded, which exceeded all previous 24-hour snowfalls and was more than had ever before occurred during an entire month. This amount, 20 inches, has been exceeded by the total annual snowfall only four times during the last 25 years.

TABLE 1.—*Climatological data for March, 1912. District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
<i>Colorado.</i>																			
Buena Vista.	Chaffee.	7,955	12	28.8	- 8.0	51	18	- 4	5	43	0.07	+ 0.32	0.30	13.5	10	15	3	13	nw.
Calhan.	El Paso.	6,700	5	26.7	-	61	19	- 2	21	53	0.85	-	0.35	10.5	6	15	5	11	sw.
Canon City.	Fremont.	5,343	24	32.7	- 10.6	67	18	- 3	2	51	1.57	+ 0.77	0.50	16.7	10	14	8	9	e.
Colorado Springs.	El Paso.	6,098	32	29.3	- 8.1	60	19	- 1	9	45	0.77	+ 0.04	0.24	13.4	6	10	11	10	se.
Cripple Creek.	Teller.	9,396	11	-	-	-	-	-	-	-	0.81	- 0.48	0.28	-	10	-	-	-	-
Cuchara Camps.	Huerfano.	8,200	3	-	-	-	-	-	-	-	4.88	-	2.16	56.1	15	8	18	5	sw.
Eads.	Kiowa.	4,269	5	29.6	-	60	29†	4	5	35	0.70	-	0.40	9.0	2	14	4	13	se.
Fairview.	Custer.	9,500	3	-	-	-	-	-	-	-	5.47	-	1.07	72.5	15	6	22	3	e.
Fremont Exp. Station.	El Paso.	8,850	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield.	Chaffee.	9,510	2	-	-	-	-	-	-	-	3.07	-	0.55	54.0	20	6	7	18	w.
Hamps.	Elbert.	5,400	19	26.0	- 10.6	62	18	- 6	1	38	0.48	- 0.43	0.10	8.0	8	14	5	12	n.
Hermit Lake.	Custer.	10,000	2	-	-	-	-	-	-	-	9.31	-	1.35	105.0	15	2	7	22	ne.
Hoechne (near).	Las Animas.	5,700	26	35.8	- 4.8	77	16	8	9	45	0.85	+ 0.21	0.15	9.6	8	16	6	9	n.
Holly.	Prowers.	3,380	17	34.0	- 11.9	74	30	10	15	44	0.43	- 0.05	0.38	1.3	2	10	5	16	n.
La Junta.	Otero.	4,052	-	-	-	-	-	-	-	-	0.65	-	0.50	3.4	4	12	8	11	ne.
Lake Moraine.	El Paso.	10,265	18	23.2	- 3.1	41	19	- 4	14	37	0.91	- 1.00	0.22	22.5	10	7	14	10	sw.
Lamar.	Prowers.	3,592	22	33.7	- 10.4	74	30	10	15	43	1.20	- 0.33	0.30	9.7	8	13	7	7	e.
Las Animas.	Bent.	3,899	44	32.9d	- 7.8	73	18†	9	2	51d	1.01	+ 0.48	0.15	17.5	9	9d	4d	18d	nd.
La Veta Pass.	Costilla.	9,000	2	-	-	-	-	-	-	-	2.85	-	1.51	34.6	5	5	10	16	w.
Leadville.	Lake.	10,248	16	23.6	- 0.6	44	10	- 1	24	40	1.92	+ 0.07	0.46	24.5	18	7	14	10	w.
Limon (near).	Elbert.	5,360	5	25.0	-	61	19	- 10	1	39	0.60	-	0.50	5.0	2	15*	3*	9*	s.
Madrid.	Las Animas.	2	-	-	-	-	-	-	-	-	0.90	-	0.19	18.0	14	-	-	-	-
Manitou.	El Paso.	31.2	-	-	-	-	-	-	-	-	0.25	-	0.25	10.0	5	14	11	6	e.
Marshall Pass.	Saguache.	10,846	9	-	-	-	-	-	-	-	2.71	-	0.37	30.0	11	13	0	18	-
Monument.	El Paso.	7,200	1	24.8	-	56	18†	- 4	5†	44	0.30	-	0.18	2.9	3	12	8	11	n.
North Lake.	El Paso.	8,700	20	-	-	-	-	-	-	-	2.60	+ 0.88	0.46	30.0	14	9	13	9	nw.
Oro.	Lake.	-	-	-	-	-	-	-	-	-	1.82	-	0.40	-	-	-	-	-	-
Pueblo.	Chaffee.	4,734	24	33.4	- 7.2	70	19	1	9	40	0.53	- 0.33	0.25	8.0	8	10	11	10	se.
Rocky Ford (near).	Otero.	4,177	23	-	-	-	-	-	-	-	3.74	-	0.56	51.5	18	6	13	12	w.
St. Elmo.	Chaffee.	9,500	3	-	-	-	-	-	-	-	0.71	- 0.11	0.25	8.5	6	23	5	3	w.
Salida.	do.	7,035	13	33.0	- 4.3	57	19†	0	5	52	1.46	- 0.29	0.67	21.9	11	12	14	5	-
Santa Clara.	Huerfano.	8,252	17	29.1	- 6.2	60	18	3	24	43	2.20	+ 1.31	1.29	12.0	5	-	-	-	-
Sheridan Lake.	Kiowa.	4,065	10	-	-	-	-	-	-	-	1.28	-	0.58	14.7	8	7	8	16	w.
Stonewall.	Las Animas.	8,000	6	-	-	-	-	-	-	-	1.09	+ 0.56	0.28	17.2	14	12	10	9	-
Trinidad.	do.	5,994	16	35.8	-	66	18†	9	14†	43	1.09	- 0.14	0.28	17.2	14	12	10	9	-
Two Buttes.	Baca.	4,100	1	32.0	-	69	30	8	15	39	2.02	-	0.67	11.0	9	7	13	11	ne.
Victor (near).	Teller.	10,100	8	23.8	-	49	28†	6	1	34	0.75	-	0.22	12.0	5	21	9	1	w.
Vilas.	Baca.	3,935	21	-	-	-	-	-	-	-	0.33	- 0.19	0.15	6.8	3	11	10	10	sw.
Wayne.	El Paso.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Westcliffe.	Custer.	7,864	18	31.7	- 2.0	53	18	0	5	52	1.47	+ 0.22	0.28	26.5	9	5	6	20	n.w.
Winfeld.	Chaffee.	9,765	2	-	-	-	-	-	-	-	2.61	-	0.36	50.5	21	3	14	14	sw.
Woodman Sanatorium.	El Paso.	1	30.6	-	-	63	19	- 2	5†	46	0.28	-	0.18	4.5	2	11	9	14	nw.
Wortman.	Lake.	11,250	11	-	-	-	-	-	-	-	3.13	- 1.12	0.60	56.8	15	2	8	21	nw.
<i>New Mexico.</i>																			
Abbott.	Mora.	5,771	3	-	-	71	18†	3	8	50	0.61	-	0.49	8.5	3	12	10	9	s.
Albert.	Union.	4,700	22	39.2	- 8.8	76	20	16	21	49	0.98	+ 0.48	0.50	6.0	3	21	3	7	w.
Aurora.	Colfax.	8,849	3	-	-	-	-	-	-	-	2.25	-	0.56	28.5	12	6	21	4	nw.
Bell Ranch.	San Miguel.	4,500	13	43.8	-	77	30	17	15	48	0.37	- 0.04	0.22	0	4	8	9	14	w.
Black Lake.	Colfax.	8,348	3	-	-	75	18†	-	-	-	1.14	-	0.34	10.8	6	5	23	3	w.
Cabeza.	San Miguel.	5,406	3	-	-	-	-	-	-	-	0.08	-	0.08	1.5	1	8	15	8	sw.
Campana.	do.	4,493	3	-	-	-	-	-	-	-	0.38	-	0.18	0.5	0	14	10	7	w.
Chacon.	Mora.	9,000	3	-	-	-	-	-	-	-	2.28	-	0.36	19.0	11	5	18	8	w.
Cimarron (near).	Colfax.	6,385	8	36.6	-	66	18†	8	15	46	1.97	-	1.00	17.2	8	7	13	11	w.
Clayton.	Union.	5,178	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Clovis.	Curry.	4,129	1	40.8d	-	75	30	18	14	46	0.38	-	0.20	2.0	2	16	4	11	ne.
Cuervo.	Guadalupe.	4,849	3	43.7	-	73	19†	14	21	43	0.11	-	0.09	1.1	2	15	9	7	sw.
Dawson.	Colfax.	6,396	3	-	-	-	-	-	-	-	1.08	-	0.81	12.2	5	2	21	8	nw.
Elizabethtown.	do.	8,465	7	29.6	-	49	30	- 6	15	45	3.36	-	0.73	29.3	17	7	12	12	sw.
Folsom.	Union.	6,399	12	35.0	- 4.6	68	18	6	24	47	0.56	- 0.12	0.30	5.2	7	16	8	7	w.
Fort Union.	Mora.	6,835	52	35.4	- 5.4	65	19	6	1	41	0.39	- 0.14	0.15	5.8	5	14	6	11	w.
Hayden.	Union.	4,444	2	38.1	-	75	18†	9	1	44	0.41	-	0.16	3.5	5	8	14	9	sw.
Hoosier Ranch.	Mora.	1	-	-	-	-	-	-	-	-	0.34	-	0.14	2.0	2	13	10	8	sw.
Johnsons Park.	Colfax.	6,722	3	-	-	-	-	-	-	-	1.19	-	1.05	0	0	2	9	11	sw.
Kappus.	Quay.	4,010	1	-	-	-	-	-	-	-	0.30	-	0.15	4.0	2	1	12	11	sw.
Lake Alice.	Colfax.	7,160	3	-	-	-	-	-	-	-	1.25	-	0.50	14.5	5	-	-	-	-
Logan.	Quay.	3,851	6	41.2	-	81	18	11	13	60	0.69	-	0.29	2.4	3	20	6	5	ne.
Lykins (near).	Roosevelt.	5,000	2	-	-	-	-	-	-	-	0.15	-	0.15	T.	1	12	11	8	sw.
Maxwell (near).	Colfax.	5,894	5	-	-	-	-	-	-	-	0.86	-	0.52	6.8	4	-	-	-	-
Melrose.	Curry.	4,400	4	-	36.4	-	66	19	4	1	43	-	0.85	13.2	5	7	19	5	w.
Miami Ranch.	Colfax.	6,000	4	-	36.4	-	66	18	16	15	53	-	0.67	8.5					

TABLE 1.—*Climatological data for March, 1912. District No. 7—Continued.*

	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.						Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.					
<i>Texas.</i>																							
Amarillo.	Potter.	3,676	20	39.2	-5.8	81	19	13	20	57	0.82	+ 0.17	0.30	3.5	11	14	10	7	n.	U. S. Weather Bureau.			
Archer City.	Archer.	1									1.61		0.52	0	9	6	8	17	n.	Charles H. Thuman.			
Arthur City.	Lamar.	590	20								5.00	+ 0.66	2.25	0	6					V. V. Bright.			
Bonham.	Fannin.	566	9	48.6		86	19	26	15	44	5.81		1.56	0	13	8	4	21	s.	H. M. Norman.			
Canadian.	Hemphill.	2,339	5	38.9		79	19	15	21	43	2.68		1.20	5.0	5	12	14	ne.	Canadian Academy.				
Childress.	Childress.	1,869	19								2.55	+ 1.60	1.10	4	13	4	14	14	nw.	W. E. Davis.			
Chillicothe.	Hardeman.	1,406	4								3.22		1.86	0	9					A. B. Connor.			
Clarendon.	Donley.	2,719	7	41.5		84	18†	18	15†	50	1.00		0.65	0.5	4	11	4	16	nw.	Whitfield Carhart.			
Clarksville.	Red River.	442	12	50.8	-8.8	83	19†	27	15†	42	7.25	+ 2.66	1.80	0	7	7	5	19	s.	J. W. O'Neill.			
Claude.	Armstrong.	3,397	7								0.15		0.15	1.5	1					F. W. & D. C. Ry.			
Dalhart.	Dallam.	3,988	7	35.9		80	19	13	21	47	0.38		0.23	4.5	3	13	2	16	s.	W. D. Griggs.			
Denison.	Grayson.	12									5.26	+ 2.34	1.95	0	10	8	1	22	n.	E. B. Wilson.			
Finley.	Bowie.	2									4.83		1.28	0	7	10	1	20	s.	Robert L. Smith.			
Henrietta.	Clay.	915	20	46.8	-8.3	87	19	19	3	35	3.00	+ 1.28	1.20	0	5	9	0	22	n.	C. K. Brown.			
Hereford.	Deaf Smith.	3,750	7								2.00		1.00	10.0	6	20*	5*	5*		A. C. Elliott.			
Memphis.	Hall.	2,067	7	50.4		83	19	30	1†	44	1.20		1.10	0	2	11	0	20	s.	F. W. & D. C. Ry.			
Miami.	Roberts.	2,743	6	39.9		80	18	15	9	39	0.90		0.30	3.0	6	10	7	14	s.	J. E. Kinney.			
Mobeetie.	Wheeler.	18									1.85		0.30	4	13	1	17	n.	Dr. W. J. Joss.				
Ochiltree.	Ochiltree.	4									2.84		1.00	11.0	6					S. J. Allen.			
Panhandle.	Carson.	3,450	3								2.00		1.00	10.0	6	20*	5*	5*		J. Sid O'Keefe.			
Paris.	Lamar.	592	23	46.5	-10.2	85	20	27	10†	43	5.91	+ 2.51	1.00	0	15	7	1	23	n.	Robert A. Miller.			
Plemons.	Hutchinson.	5		37.4		80	19	10	24	45	1.06		0.49	5.2	6	11	8	12	n.	C. S. Solomon.			
Quanah.	Hardeman.	1,563	10	43.2		87	18	19	9	44	2.35	+ 0.99	1.85	0	4	13	1	17	n.	William H. Crawford.			
Ringo Crossing.	Hopkins.	2									5.73		1.90	0	8	4	1	26	nw.	H. J. Palmer.			
Romero.	Hartley.	2		39.5		80	19	12	1	60	0.81		0.50	1.4	4	9	8	14	s.	R. S. Chamberlain.			
Sherman.	Grayson.	745	19	48.2	-8.1	84	19	28	9	38	5.82	+ 2.76	2.12	0	11	9	2	20	n.	R. A. Gibbs.			
Stratford.	Sherman.	3,699	7	37.0		77	19	12	8†	45	1.17		0.70	10.0	7	11	7	13	s.	J. W. Elliott.			
Texline.	Dallam.	4,694	7	42.8	-7.0	83	19	15	21	47	1.15	-0.39	0.40	7.0	5					F. W. & D. C. Ry.			
Tulia.	Swisher.	3,501	14								3.19	+ 1.33	0.79	0	9	11	7	13	n.	Lou Mulhall.			
Wichita Falls.	Wichita.	958	20								5.71		1.52	0	9	2	14	15	se.	E. F. Mittermann.			
Winfield.	Titus.	2																	J. B. Newberry.				
<i>Kansas.</i>																							
Alden.	Rice.	1,684	2								1.21		0.52	18.0	6	14	0	17	se.	L. B. Wait.			
Anthony.	Harper.	1,323	15	35.8		74	18	12	15	41	1.75	+ 0.64	0.75	14.5	10	9	7	15	ne.	R. H. Beebe.			
Ashland.	Clark.	1,951	24	34.8	-11.7	76	18	7	9	46	1.17	+ 0.23	0.50	9.2	11	8	10	13	e.	C. W. Carson.			
Burlington.	Coffey.	1,010	19	34.6	-10.4	73	30	6	6	41	5.32	+ 3.23	21.0	7	2	18	13	ne.	O. E. Sanford.				
Chanute.	Neosho.	940	8	36.6		73	19	9	6	38	9.15		1.60	18.5	15	5	8	18	ne.	C. W. Brown.			
Cimarron.	Gray.	2,700	31.2								1.60		1.12	7	11	6	14	14	se.	C. C. Isely.			
Coldwater.	Comanche.	2,090	15	33.3	-13.3	73	30	4	9	40	0.96	-0.24	0.45	9.0	5	13	3	15	n.	J. L. Stanley.			
Columbus.	Cherokee.	898	22	39.0	-7.1	73	19†	14	6	37	5.99	+ 2.52	1.72	7.2	14	10	3	18	ne.	O. E. Skinner.			
Coolidge.	Hamilton.	3,438	15	31.6	-9.3	75	30	8	15	48	0.26	+ 0.06	1.20	2.0	2	10	4	17	ne.	W. R. Padley.			
Cottonwood Falls.	Chase.	1,234	8	31.4		71	30	2	9	32	3.73		0.80	17.2	13	10	6	15	n.	E. B. Greene.			
Council Grove.	Morris.	1,234	5	29.2		88	19	-1	9	35	2.15		0.61	12.8	8	10	8	13	n.	J. P. Blackledge.			
Cunningham.	Kingman.	1,980	28	33.2	-10.0	74	18†	4	9	42	1.82	+ 0.66	0.75	13.8	7	10*	5*	15*	se.	W. H. Morton.			
Dodge City.	Ford.	2,513	30	30.6	-11.1	71	30	2	9	36	0.97	+ 0.09	0.50	11.2	13	5	8	18	se.	U. S. Weather Bureau.			
El Dorado.	Butler.	1,291	10	34.8		72	30	7	9	34	3.41		0.75	15.5	9	11	7	13	n.	W. Y. Miller.			
Ellinwood.	Barton.	1,790	37	31.6	-10.0	73	30	-2	9	35	1.50	+ 0.24	0.54	14.1	13	5	11	15	ne.	Martin Musil.			
Emporia.	Lyons.	1,138	31	33.9	-8.3	72	30	4	6	34	3.44	+ 1.50	0.89	21.0	14	6	14	11	ne.	W. H. Boyles.			
Eureka.	Greenwood.	1,079	16	34.6		73	30	9	6	34	3.98	+ 2.33	0.93	14.7	11	8	12	11	ne.	Mrs. T. C. Peffer.			
Fall River.	do.	925	16	35.3	-10.2	73	18†	10	6	42	4.45	+ 2.04	0.88	15.0	13	10	8	13	n.	J. McDaniel.			
Fargo.	Seward.	2									0.60		0.50	5.0	2	9	2	20	se.	N. B. Swink.			
Frederonia.	Wilson.	975	9	36.6		75	18	10	6	41	2.74		0.86	16.5	13	11	7	13	ne.	B. W. Holmes.			
Garden City.	Finney.	2,836	23	32.0	-11.3	75	30	7	15	40	0.98	+ 0.14	0.40	6.8	5	10	5	16	s.	I. Pritchard.			
Great Bend.	Barton.	1,850	3								2.19		0.80	12.5	6	11	2	18	se.	C. C. Raymond.			
Greensburg.	Kiowa.	2,235	5	32.1		76	30	0	9	34	1.24		0.50	11.5	7	12	5	14	se.	W. H. Lawyer.			
Gretna.	Elk.	1,116	24	35.9	-9.9	74	18†	12	6	43	2.49	+ 0.34	0.80	8.0	9	7	15	ne.	Harry Jaques.				
Hess.	Gray.	2,700	6	30.6		72	30	3	15	36	0.70		0.40	7.0	5	11	9	10	se.	J. W. Eby.			
Howard.	Elk.	1,112	5	36.0		73	30	13	6	39	2.85		0.99	16.5	5	12	3	16	ne.	E. M. Anderson.			
Hugoton.	Stevens.	8		33.6		78	30	6	24	44	0.93		0.56	9.8	7	11	10	16	ne.	E. S. Webster.			
Hutchinson.	Reno.	1,535	22	32.6	-12.4	73	30	2	9	36	3.39	+ 2.12	0.86	17.0	10	5	16	16	ne.	F. L. Kenoyer.			
Independence.	Montgomery.	800	38	38.7	-7.8	76	18	14	6	41	4.82	+ 2.36	0.95	9.0	15	9	4	18	ne.	N. M. Herbig.			
Iola.	Hamilton.	984	6	34.3	-8.1	71	30	10	6	37	5.18	+ 2.83	1.80	19.3	12	7	9	15	se.	James Alken.			
Jetmore.	Hodgeman.	2,268	11	31.0		74	30	-2	9	44	2.24	+ 1.54	1.30	13.8	7	6	8	17	se.	B. B. Anawalt.			
Kingman.	Kingman.	1,504	4	34.7		74	30	7	9	37	2.50		0.96	22.5	8	12	8	11	ne.	Rodney Torrey.			
La Crosse.	Rush.	2,061	10	30.4		74	30	-6	9	40	1.72	+ 1.15		18.5	5	10b	5b	14b	ne.	C. H. Longstreth.	</td		

TABLE 1.—Climatological data for March, 1912. District No. 7—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.1 inch or more.	Number of cloudy days.	Number of clear days.			
<i>Oklahoma.</i>																				
Ada.	Pontotoc.	1,001	4	45.1	.....	90	19	21	9	47	4.89	.....	1.28	0	12	9	4	18	s.	
Alva.	Woods.	1,350	7	37.0	.....	75	18	12	9	43	1.25	.....	0.80	12.0	3	9	9	13	n.	
Apache.	Caddo.	1,255	2	42.9	.....	89	19	20	5†	44	5.91	.....	1.81	0	15	14	1	16	ne.	
Arapaho.	Custer.	1,575	18	40.5	-11.1	87	19	16	9	50	0.88	-0.17	0.40	T.	4	7	4	20	n.	
Ardmore.	Carter.	872	10	45.8	-10.5	90	19	24	9†	42	4.78	+ 2.44	1.30	0	12	10	2	19	n.	
Arnett.	Ellis.	2,136	8	38.8	.....	79	13	13	9	42	1.75	.....	0.70	10.0	5	10	17	4	n.	
Bartlesville.	Washington.	687	4	40.1	.....	79	19	17	9	41	3.89	.....	1.12	7.0	9	10	4	17	nw.	
Beaver.	Washington.	2,500	15	35.0	-13.4	74	20	13	9	42	3.31	+ 0.61	0.82	8.4	7	15	1	15	s.	
Blackburn.	Beaver.	800	10	42.1	.....	85	19	18	9	37	3.94	+ 1.24	1.65	1.0	11	10	6	15	sw.	
Cache.	Comanche.	1,350	6	41.0	.....	86	19	17	9	50	4.74	.....	1.40	0	7	10	5	16	n.	
Calvin.	Hughes.	713	7	.....	.....	7	13	13	9	44	4.44	.....	1.25	0	13	9	0	22	s.	
Chandler.	Lincoln.	865	10	41.8	-12.6	83	19	18	5	41	6.43	+ 4.81	2.60	0.7	6	7	4	20	n.	
Chattanooga.	Comanche.	1,150	6	44.8	.....	88	18	21	9	48	5.85	.....	2.15	0	9	13	2	16	n.	
Chickasha.	Grady.	1,091	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. C. Good.		
Cloud Chief.	Washita.	1,400	10	43.1	-12.3	90	19	19	9	51	1.35	-0.48	0.00	0	6	9	2	20	J. P. Stutzman.	
Crawford.	Roger Mills.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. O. Orr.		
Durant.	Bryan.	643	10	45.0	-11.3	86	19	26	15†	44	7.01	+ 3.47	3.00	0	13	10	6	15	n.	
Eldorado.	Jackson.	1,456	15	45.2	.....	88	20	19	9	51	1.89	.....	1.30	T.	5	12	7	12	se.	
Els City.	Beckham.	.....	.....	40.8	.....	75	30	10	9	46	1.94	.....	1.00	T.	4	16	1	14	s.	
El Reno.	Canadian.	1,400	20	40.0	-10.9	88	18	18	9	52	3.27	+ 1.28	1.57	T.	11	11	6	14	n.	
Enid.	Garfield.	1,280	10	38.6	-13.1	76	19	19	5†	42	1.62	-0.07	0.45	2.4	9	14	5	12	n.	
Erick.	Beckham.	2,058	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. W. Hanes.		
Eufaula.	McIntosh.	666	10	46.6	.....	87	19	22	13	44	4.08	.....	1.10	0	11	9	4	18	s.	
Fairland.	Ottawa.	839	12	42.2	-9.6	80	19	18	9	46	5.89	+ 2.85	1.57	0.5	14	5	11	15	n.	
Fort Gibson.	Muskogee.	556	7	.....	.....	88	20	19	9	51	6.33	.....	1.94	T.	12	10	0	21	n.	
Frederick.	Tillman.	1,293	5	44.8	.....	88	18	21	9	50	5.14	.....	2.15	0.5	9	9	3	19	n.	
Geary.	Blaine.	1,546	40.7	.....	.....	87	19	17	9	40	1.49	.....	0.24	1.3	12	14	4	13	n.	
Goodwell.	Texas.	3,200	1	36.5	.....	76	19	9	24	43	0.95	.....	0.75	5.5	3	12	5	14	s.	
Guthrie.	Logan.	1,000	19	43.1	.....	88	19	19	9	37	5.35	+ 3.09	1.25	2.0	12	12	1	18	n.	
Guymon.	Texas.	3,133	2	38.2	-8.8	86	19	19	9	37	1.56	.....	0.75	6.0	2	5	15	6	10	
Hartshorne.	Pittsburg.	700	13	47.3	-8.6	86	19†	17	5	48	7.11	+ 3.87	2.50	T.	16	11	1	19	n.	
Healdton.	Carter.	900	18	45.8	9.4	92	19	22	16†	51	6.56	+ 4.14	2.41	0	10	5	10	16	n.	
Helena.	Alfalfa.	1,396	4	37.2	.....	75	18	15	9	43	1.25	.....	0.50	5.0	7	12	3	16	n.	
Hennessey.	Kingfisher.	1,166	17	40.24	-11.2	80	20	19	9	40	3.0	.....	2.46	+ 0.67	0.85	3.0	12	6	12	n.
Hobart.	Kiowa.	1,396	9	43.4	.....	83	19	20	15†	49	1.98	.....	0.71	0	13	6	9	16	s.	
Holdenville.	Hughes.	900	11	44.2	-11.6	88	19	22	9	44	5.15	+ 3.02	2.21	0	8	11	3	17	n.	
Hooker.	Texas.	3,038	6	35.0	.....	74	19	12	21†	45	0.67	.....	0.67	5.0	1	6	1	24	n.	
Hurley.	Cimarron.	4,200	4	33.9	.....	73	19	10	1	42	0.80	.....	0.40	8.0	4	1	11	19	sw.	
Idabel.	McCurtain.	474	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. L. Henderson.		
Jefferson.	Grant.	1,062	18	37.8	-11.2	75	19	16	9	43	1.05	+ 0.35	0.55	6.0	11	9	10	12	n.	
Kenton.	Cimarron.	4,000	11	37.3	8.8	78	19	12	1	48	0.20	-0.43	0.10	2.0	2	13	4	14	n.	
Kingfisher.	Kingfisher.	1,046	15	41.5	-10.3	85	19	19	9	42	2.53	+ 0.34	0.53	T.	10	5	12	4	14	n.
Lawton.	Comanche.	1,111	15	46.8	.....	88	19	23	9	47	5.09	+ 1.55	0.93	0	15	9	0	22	n.	
McAlester.	Pittsburg.	698	15	46.8	.....	88	19	12	9	47	5.09	.....	1.28	0	15	9	0	22	n.	
Manquin.	Greer.	1,585	19	47.4	-5.3	87	19†	18	9	54	1.92	+ 1.19	0.90	T.	5	12	3	16	se.	
Marlow.	Stephens.	1,292	11	43.0	-11.6	91	19	22	21	51	6.09	+ 4.21	2.66	T.	10	9	1	21	s.	
May.	Harper.	.....	.....	.....	.....	.....	.....	13	9	42	1.28	.....	0.60	12.8	4	6	0	25	s.	
Meeker.	Lincoln.	1,030	18	42.0	-9.5	85	18	22	8	48	5.90	+ 3.93	1.75	T.	7	10	4	17	s.	
Muskogee.	Muskogee.	614	13	45.6	-7.7	86	19	22	9	42	5.03	+ 2.22	1.83	T.	9	9	2	20	s.	
Mutual.	Woodward.	.....	4	36.8	.....	83	19	12	9	45	1.12	.....	0.80	4.0	3	12	3	16	n.	
Neola.	Paddo.	1,500	6	42.0	.....	87	19	18	9	45	3.55	.....	1.65	0.2	8	9	7	15	se.	
Newkirk.	Kay.	1,149	19	39.4	-10.1	78	31	15	9	35	2.91	+ 1.00	1.02	4.5	5	12	2	17	n.	
Norman.	Cleveland.	1,171	17	42.4	-10.1	88	19	19	9	46	6.57	+ 5.15	1.85	0	12	7	7	17	s.	
North Muskogee.	Muskogee.	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.52	.....	2.09	T.	6	9	0	22	n.	
Oakwood.	Dewey.	1,854	2	37.8	.....	85	19	18	9	48	0.96	.....	0.27	0.5	9	12	1	18	n.	
Okeene.	Bain.	1,194	7	40.2	.....	83	19	17	9	35	1.73	.....	0.37	1.1	11	12	10	9	ne.	
Oklahoma.	Oklahoma.	1,247	22	40.9	-8.3	86	19	19	9	42	4.11	+ 1.73	2.12	0	5	15	9	18	n.	
Okmulgee.	752	7	40.4	.....	90	21	21	9	48	0	.....	.....	0	5	1	18	.....	J. L. Maynard.		
Pauls Valley.	Garvin.	880	11	.....	.....	.....	.....	.....	.....	.....	4.52	.....	2.09	T.	6	9	0	22	A. M. Foss.	
Pawhuska.	Osage.	918	11	.....	.....	.....	.....	.....	.....	.....	0.96	.....	0.27	0.5	9	12	1	18	R. C. Block.	
Perry.	Noble.	920	13	40.8	-10.5	79	19	21	6†	41	3.31	+ 1.44	0.85	2.0	11	9	6	16	ne.	
Rankin.	Binger Mills.	2,200	8	39.2	.....	84	19†	12	9	46	0.85	.....	0.40	T.	2	8	5	18	nw.	
Ravia.	Johnston.	796	9	46.8	.....	94	18	22	15	49	4.94	.....	0.97	0	11	12	1	18	s.	
Sac and Fox Agency.	Lincoln.	900	18	46.7	-4.8	87	19	20	9	45	5.72	+ 3.64	1.80	0	12	9	6	16	n.	
Shawnee.	Pottawatomie.	1,041	10	40.6	-13.8	88	19	19	9	45	6.89	+ 4.88	3.20	T.	12	4	8	19	se.	
Snyder.	Payne.	1,356	5	43.8	.....	86	18	16	9	44	3.98	.....	1.33	0	9	7	8	16	n.	
Stillwater.	Tulsa.	780	23	42.4	.....	85	19	18	9	36	4.66	+ 2.18	1.87	T.	9	12	1	18	A. R. Evans.	
Tulsa.	Craig.	698	8	42.2	.....	81	19	19	9	36	5.96	+ 3.43	2.55	T.	10	13	4	14	se.	
Vinita.	Wagoner.	588	15	43.8	-8.6	87	19	20	9	44	5.95	+ 3.09	1.50	2.40	0	8	11	0	20	w. C. Chamberlain.
Wagoner.	Garfield.	1,258	15	40.0	-11.6															

TABLE 1.—Climatological data for March, 1912. District No. 7—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
<b>Missouri—Continued.</b>																			
Mountaingrove.....	Wright.....	1,490	14	39.5	- 8.7	79	19	10	1	42	4.31	- 0.12	1.05	6.0	13	11	3	17	se.
Mount Vernon.....	Lawrence.....	1,480	31	39.6	- 7.5	79	19	9	1	43	4.66	+ 0.96	1.15	3.5	13	10	4	17	sw.
Neosho.....	Newton.....	1,023	30	41.2	- 7.2	80	19	15	1	46	5.71	+ 2.29	1.35	2.0	12	10	1	20	ne.
New Madrid.....	New Madrid.....	285	19								6.45	+ 0.81	1.40	6.0	18	11	2	18	s.
Oakfield.....	Franklin.....	793	21	35.9	- 10.3	78	19	12	6	34	5.71	+ 2.01	1.88	39.5	14	5	12	14	s.
Olden.....	Howell.....	1,246	23	41.0	- 7.6	82	19	15	1	41	4.00	- 0.96	1.01	15.3	17	14	3	14	se.
Rolla.....	Phelps.....	1,139	31	37.4	- 8.5	79	19	12	1†	45	4.48	+ 0.96	1.22	8.0	14	9	6	16	ne.
Springfield.....	Greene.....	1,350	25	37.8	- 5.7	75	18	14	1	37	4.47	+ 0.40							se.
<b>Kentucky.</b>																			
Blandville.....	Ballard.....	445	31	41.9	- 5.2	78	19	20	1	37	6.35	+ 1.48	1.20	6.8	15	8	6	17	sw.
<b>Tennessee.</b>																			
Arlington.....	Shelby.....	30		44.8	- 6.7	78	19	23	1	41	8.46	+ 3.34	1.85	0	14	10	1	20	n.
Bolivar.....	Hardeman.....	450	25	44.6	- 5.5	75	19	24	1	29	8.96	- 2.43	2.43	0	16	10	6	15	n.
Brownsville.....	Haywood.....	361	27	44.6	- 6.3	78	19	25	1	29	7.77	+ 3.40	2.25	0	13	9	0	22	s.
Covington.....	Tipton.....	311	25	44.7	- 6.3	79	19	24	1†	39	6.63	+ 2.28	1.48	1.0	10	12	0	19	nw.
Dyersburg.....	Dyer.....	310	29	44.6	- 5.9	79	19	24	1†	39	6.63	+ 2.28	1.48	1.0	10	7	8	16	n.
Jackson.....	Madison.....	450	19	45.8	- 6.9	80	19	20	10	39	7.75	+ 3.17	1.78	0	10	7	8	16	n.
Kenton.....	Obion.....	325	10	44.2	- 9.4	79	19	23	1†	39	7.94	+ 3.54	1.88	T.	14	11	2	18	ne.
Memphis.....	Shelby.....	400	41	46.1	- 6.0	76	19	28	1	38	9.53	+ 3.76	2.91	T.	13	7	6	18	u.s.
Milan.....	Gibson.....	440	29	42.9	- 6.1	80	19	23	1†	38	6.10	+ 1.95	2.10	2.0	15	10	1	20	s.
Trenton.....	do.....	345	29	42.0	- 8.1	80	19	21	1	38	7.70	+ 2.58	2.53	1.0	11	4	16	sw.	
Union City.....	Obion.....	360	14	43.4	- 7.4	79	19	22	1	40	6.24	+ 0.84	1.24	3.0	16	10	6	15	n.
<b>Arkansas.</b>																			
Alicia.....	Lawrence.....	8	43.0			78	19	24	1	39									McCullough & Guelck.
Amity.....	Clark.....	250	20																J. W. Campbell.
Arkadelphia (near).....	do.....	250	5	48.4		82	19†	27	13	35	9.90		2.44	0	13	10	4	17	ne.
Arkansas City.....	Dosh.....	145	29								6.34		3.00	0	15				W. C. Blundell.
Batesville.....	Independence.....	271	7										1.03	T.	13				Leila J. Teter.
Bee Branch.....	Van Buren.....	20	44.6	- 7.6	80	18	22	1	44	8.50	+ 3.53	1.75	0	12	5	6	20		
Benton.....	Saline.....	283	5	46.0		81	20	23	1	41	9.01		2.15	0	10	11	8	12	ne.
Bentonville.....	Benton.....	1,303	7	40.8	- 6.5	81	19	18	1	36	5.33	+ 1.51	1.72	3.8	19	10	2	19	s.
Bergman.....	Boone.....	1,324	15	42.2	- 3.7	80	19	13	1	46	4.38	+ 1.02	0.81	2.0	9	10	2	19	ne.
Black Rock.....	Lawrence.....	250	8								4.69		0.74	1.0	11				J. T. Maxey.
Brinkley.....	Monroe.....	228	26	47.8	- 5.4	81	19	22	1	34	11.04	+ 5.18	2.56	0	12	8	5	18	
Calico Rock.....	Izard.....	361	8								4.15		0.70	0	13				H. L. D. Whitson.
Camden.....	Ouachita.....	158	27	49.2	- 6.0	81	19	26	13	41	10.17	+ 4.50	1.80	0	14				W. H. Stoner.
Center Point.....	Howard.....	470	12	49.0	- 9.7	81	19†	27	13†	38	8.67	+ 4.19	1.90	0	9	5	6	20	sw.
Clarendon.....	Monroe.....	171	8								10.95		2.70	0	16				R. K. Quarterman.
Conway.....	Faulkner.....	309	29	46.4	- 5.8	81	18	25	1	43	7.59	+ 2.79	1.50	T.	14	8	5	18	ne.
Corning.....	Clay.....	293	20								4.85	- 0.33	0.96	0.8	11				G. H. Burr.
Dardanelle.....	Yell.....	333	26	45.7		81	18	25	1	45	6.44	+ 1.57	1.82	0	13				Jacob Brobst.
Dodd City.....	Marion.....	1,175	31	42.2	- 6.9	85	19	10	1	44	4.70	+ 0.36	0.80	T.	9				A. Bernard.
Dutton.....	Madison.....	9	40.8			80	19	11	1	43	4.36		1.03	T.	11	5	8	18	Neal Dodd.
El Dorado.....	Union.....	265	8	46.8		80	18†	29	13	34	11.25		2.26	0	14				J. M. Ricketts.
England.....	Lonoke.....	6	47.2			81	19	27	1	35	10.00		2.20	T.	12	4	2	25	Jeff J. Babb.
Eureka Springs.....	Carroll.....	1,465	10	42.4	- 9.7	86	19	16	1	46	5.10	+ 1.16	1.44	T.	8	4	9	18	ne.
Fayetteville.....	Washington.....	1,451	23	42.8	- 6.2	81	19	19	1	43	5.41	+ 1.24	1.58	0	14	9	7	15	University of Arkansas.
Fordyce.....	Dallas.....	48.8				82	19	28	1†	38	12.72		3.45	0	13	5	9	17	A. Tredick.
Fort Smith.....	Sebastian.....	481	30	45.3	- 6.0	82	19	26	9	34	4.64	+ 1.02	1.57	0	16	6	5	20	U. S. Weather Bureau.
Fraziers Turnpike.....	Pulaski.....										8.92		2.75	0	9	7	4	20	R. E. Brown.
Fulton.....	Hempstead.....	264	8								8.23		1.24	0	11				B. C. Logan.
Hardy.....	Sharp.....	643	14	43.2	- 8.5	79	19	18	1	42	5.01	+ 0.06	0.83	0.5	13	4	11	16	ne.
Heleena.....	Phillips.....	182	27															C. A. Caywood.	
Hot Springs.....	Garland.....	600	20	47.8	- 6.0	80	19	29	1†	37	11.79	+ 6.79	2.45	T.	11	10	4	17	B. F. Modisett.
Huttig.....	Union.....	85	5	50.7		82	19	30	13†	39	12.87		2.71	0	13	6	15	10	se.
Jonesboro.....	Craighead.....	345	17	45.8	- 6.3	78	18†	22	1	36	6.07	+ 1.05	1.53	0	8	1	20		Benedictine Sisters.
Junction.....	Union.....	19	50.2	- 6.7	78	19	27	13	37	6.44	+ 0.37	1.30	0	9	6	4	21	J. A. Lowderback.	
Lake Farm.....	Jefferson.....	195	5	46.6		81	19	24	1	36	10.58		2.40	0	10	8	9	14	R. H. Gillispie.
Lewisville.....	Lafayette.....	262	9	49.6		82	19†	28	13†	35	6.53		2.00	0	10	7	11	4	F. W. Youmans.
Little Rock.....	Pulaski.....	357	33	46.6	- 6.1	79	19	27	1	38	9.05	+ 4.11	2.02	0	16	9	3	19	U. S. Weather Bureau.
Lutherville.....	Johnson.....	775	15	44.4	- 8.9	80	19	24	1	40	4.73	+ 0.82	0.95	0	13	9	10	12	W. R. Hentschel.
Malvern.....	Hot Springs.....	277	25	47.2	- 6.9	80	19†	27	25	39	8.87	+ 3.72	1.33	0	13				Miss L. C. Smith.
Mammoth Spring.....	Fulton.....	512	8	42.4		80	19	17	1	43	5.43		1.40	1.14	14	10	10	11	F. Wallack.
Marked Tree.....	Poinsett.....	229	5								7.31		1.96	0	12				L. Smith.
Mena.....	Polk.....	1,100	26	45.1	- 7.6	79	19	26	13†	40	6.48	+ 1.12	1.61	0	9	8	7	16	R. R. St. John.
Newport.....	Jackson.....	231	28	44.2	- 6.1	74	18†	25	1	38	7.54	+ 2.62	1.60	0	14				Chas. Sprigg.
Ozark.....	Franklin.....	377	21															R. M. Adams.	
Pine Bluff.....	Miller.....	213	24	47.7	- 6.8	81	19	28	1	40	10.61	+ 4.97	2.81	0	12				J. M. Hudson.
Pocahontas.....	Randolph.....	20	44.4	- 5.0	78	19	22	1	40*	5.30	+ 0.41	0.95	1.0	11	8	11	12	Benedictine Sisters.	
Pond.....	Benton.....	1,260</td																	

TABLE 1.—Climatological data for March, 1912. District No. 7—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Number of rainy days, 0.1 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmetted.							
<i>Mississippi.</i>																					
Anguilla.....	Sharkey.....	107	4	52.1	—	79	21	30	2	33	9.60	+ 9.16	1.40	0	12	6	9	16	ne.	E. W. Cook.	
Austin.....	Tunica.....	200	16	47.0	— 8.4	79	19	25	1	35	14.94	+ 9.16	4.05	0	16	8	5	18	s.	H. J. Irvine.	
Batesville.....	Panola.....	230	25	48.4	— 5.1	80	18	24	1	39	11.71	+ 5.66	2.70	0	15	11	2	18	w.	J. M. Cox.	
Big Creek.....	Calhoun.....	49.1	—	78	18†	25	1	37	11.93	—	3.25	T.	11	—	—	—	—	s.	J. P. Havens.		
Byhalia.....	Marshall.....	390	3	52.9	— 4.8	82	21	31	1†	36	8.85	+ 3.03	2.04	0	11	2	15	14	se.	Tallahatchie Drainage Com.	
Canton.....	Madison.....	228	22	53.9	—	82	21	31	1†	36	8.85	+ 3.03	1.90	0	15	8	2	21	s.	Dr. G. W. Smith-Vaniz.	
Charleston.....	Tallahatchie.....	2	—	52.2	—	84	19	24	1	42	12.37	—	2.42	0	16	8	2	21	n.	W. B. Burke.	
Clarksdale.....	Coahoma.....	177	5	47.2	—	80	18†	26	1	35	12.64	—	2.79	0	13	12	0	19	ne.	W. W. Boone.	
Coffeeville.....	Yalobusha.....	241	3	46.7	— 5.9	79	20	24	1†	42	10.64	+ 4.91	3.20	0	17	10	0	21	se.	Tallahatchie Drainage Com.	
Corinth.....	Alcorn.....	470	24	46.7	— 5.9	79	20	24	1†	42	10.64	+ 4.91	2.50	0	16	7	6	18	w.	M. A. Candler.	
Crenshaw.....	Panola.....	187	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	Tallahatchie Drainage Com.	
Denmark.....	Lafayette.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	W. H. Eskridge.	
Duck Hill.....	Montgomery.....	13	50.4	— 6.6	78	18†	26	1	36	11.57	+ 5.36	3.16	0	—	—	—	—	—	s.	E. F. Farr.	
Edwards.....	Hinds.....	222	25	54.6	— 4.3	85	19†	32	10†	35	8.55	+ 2.92	1.50	0	8	10	14	7	ne.	Tallahatchie Drainage Com.	
Enid.....	Tallahatchie.....	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	W. L. Darden.	
Fayette.....	Jefferson.....	270	11	54.8	— 4.5	84	21	30	13†	40	7.50	+ 1.50	2.00	0	8	5	15	11	s.	F. L. Harbison.	
Greenville.....	Washington.....	126	25	49.4	— 7.1	82	19	28	1	35	11.95	+ 6.18	1.85	0	15	9	1	21	ne.	J. H. Stephen.	
Greenwood.....	Leflore.....	140	12	48.4	— 7.6	80	18†	28	1	36	10.09	+ 3.76	1.46	0	18	9	4	18	se.	Tallahatchie Drainage Com.	
Grenada.....	Grenada.....	194	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	W. F. Wood.	
Hernando.....	De Soto.....	391	24	46.0	— 8.0	78	18†	23	1	35	12.69	—	2.89	0	16	10	2	19	n.	Tallahatchie Drainage Com.	
Hickory Flat.....	Benton.....	435	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	L. B. Mosby.	
Holly Springs.....	Marshall.....	600	28	46.3	— 5.8	75	19	24	1	34	10.77	+ 3.85	2.12	0	16	9	2	20	s.	E. L. Lucas.	
Kosciusko.....	Attala.....	430	22	50.2	— 6.2	82	21	28	1	40	9.29	+ 3.08	1.80	0	19	11	5	15	ne.	Tallahatchie Drainage Com.	
Lake Cormorant.....	Lula.....	206	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	Miss Loula Erikson.	
Lula.....	Coahoma.....	182	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	James E. Lee.	
Malone.....	Marshall.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	W. H. Courts.	
Marks.....	Quitman.....	163	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	F. L. Garrity.	
Natchez.....	Adams.....	206	24	55.8	— 5.8	88	28	34	13†	39	8.66	+ 2.57	2.45	0	9	8	2	21	s.	Tallahatchie Drainage Com.	
New Albany.....	Union.....	398	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	sw.	Dr. C. W. Bolton.	
Pontotoc.....	Pontotoc.....	475	23	49.4	— 5.0	79	19	25	1	39	11.53	+ 5.52	3.00	0	16	5	4	22	nw.	H. H. Crisler.	
Port Gibson.....	Claiborne.....	116	24	52.9	— 6.8	85	20	30	16	41	9.16	+ 3.87	2.57	0	14	5	4	18	w.	T. J. Murray.	
Rosedale.....	Bolivar.....	143	4	47.0	—	87	19	26	1†	40	13.71	—	2.05	0	17	9	4	18	se.	Tallahatchie Drainage Com.	
Senatobia.....	Tate.....	284	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	J. C. Pitchford.	
Shoecoe.....	Madison.....	9	52.6	—	85	21	25	10	46	7.75	+ 2.59	1.88	0	10	14	5	12	se.	Prof. George H. Kent.		
Suffolk.....	Franklin.....	11	56.8	— 5.2	83	21	31	16	36	7.28	+ 1.26	2.70	0	11	8	8	15	s.	W. J. Hawkins.		
Swan Lake.....	Tallahatchie.....	148	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	e.	Dr. M. P. Winkler.	
Tchula.....	Holmes.....	130	7	53.0	—	80	21	29	1	32	9.14	—	1.43	T.	10	5	12	14	s.	Prof. J. H. Dorrah.	
University.....	Lafayette.....	502	19	48.2	— 6.1	77	18†	23	1	31	12.89	+ 6.48	2.20	0	15	11	4	16	se.	Dr. J. B. Dudley.	
Utica.....	Hinds.....	287	8	54.4	—	84	21	31	10	38	10.05	—	2.65	0	11	—	—	—	nw.	U. S. Weather Bureau.	
Vicksburg.....	Warren.....	247	41	53.2	— 5.0	80	21	34	1	33	7.44	+ 1.19	1.94	0	12	4	11	16	e.	Miss Loula Erikson.	
Water Valley.....	Yalobusha.....	300	23	48.6	— 6.6	80	19	24	24	1	34	10.10	+ 4.31	3.40	T.	11	10	7	14	n.	James E. Lee.
Woodville.....	Wilkinson.....	560	19	58.2	— 5.4	82	18†	33	13	32	6.25	+ 0.30	2.08	0	7	16	8	7	se.	W. H. Courts.	
Yazoo City.....	Yazoo.....	116	18	52.4	— 6.7	82	21	30	1	34	10.05	+ 4.31	1.91	0	15	10	5	16	s.	F. L. Wentz.	
<i>Louisiana.</i>																					
Abbeville.....	Vermilion.....	18	24	59.3	— 3.9	85	21	35	16	32	4.13	+ 0.73	1.70	0	9	8	7	16	se.	C. J. Edwards.	
Alexandria.....	Rapides.....	77	24	54.7	— 5.9	80	18†	32	16	42	6.65	+ 1.36	1.87	0	9	5	2	24	s.	Nellie Graham.	
Amitie.....	Tangipahoa.....	130	24	59.3	— 2.5	84	21	35	10†	33	10.25	+ 4.82	3.20	0	9	1	27	3	s.	Lulu M. Wentz.	
Antioch.....	Calhoun.....	50.4	—	87	17	21	8	48	9.65	—	2.10	0	12	8	0	23	s.	W. L. Anglin.			
Avoca Island.....	St. Mary.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	J. N. Pharr and Sons, Ltd.	
Baton Rouge.....	East Baton Rouge.....	60	24	50.3	— 2.5	84	31	37	13†	34	5.79	+ 0.85	1.90	0	9	6	15	10	se.	Elmo M. Bott.	
Burnside.....	Ascension.....	20	12	61.0	— 2.6	85	19	36	13	30	7.89	+ 2.77	2.70	0	8	9	10	12	s.	C. S. McFarland.	
Burrwood.....	Plaquemines.....	1	24	60.0	— 2.4	84	21	44	13†	25	3.56	+ 0.19	1.60	0	5	12	15	4	se.	Graham Meyers.	
Cades.....	St. Martin.....	2	24	59.8	—	85	21	34	25	31	3.60	—	2.48	0	5	11	8	14	s.	C. E. Smedes.	
Calhoun.....	Ouachita.....	180	24	51.8	— 5.2	82	18	28	16†	43	9.90	+ 4.93	1.67	0	11	6	11	14	se.	North Louisiana Exp. Sta.	
Carrollton.....	Cameron.....	6	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	Adolph Bruckert.	
Cheneyville.....	Rapides.....	67	24	58.0	— 2.9	83	21	33	16	37	7.00	+ 2.09	2.95	0	8	12	5	14	s.	Loyola College.	
Clinton.....	West Baton Rouge.....	67	24	58.6	—	84	31	36	97	32	6.08	—	2.00	0	10	4	10	17	se.	Walter I. Tanner.	
Collinston.....	East Feliciana.....	113	24	58.2	— 3.4	83	18	34	16	33	4.63	+ 1.03	1.42	0	10	6	4	21	n.	Cinclare Central Factory.	
Collinston.....	Morehouse.....	65	11	53.4	— 7.0	84	18	31	13	38	9.92	+ 4.41	2.54	0	11	5	9	17	s.	John A. White.	
Columbia.....	Caldwell.....	127	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	John B. Rely.	
Covington.....	St. Tammany.....	39	20	59.6	— 2.9	84	21	35	13	40	7.43	+ 2.03	1.95	0	10	4	7	20	e.	H. W. Blanks.	
Dodson.....	Winn.....	3	53.4	— 1.9	82	18	29	16	39	8.88	—	2.10	0	9	4	12	15	n.	Cecile P. Champagne.		
Donaldsonville.....	Ascension.....	33	24	60.6	— 1.9	88	31	35	13	40	16.58	+ 12.12	5.20	0	9	10	3	18	se.	J. P. Lucas.	
Dutchtown.....	do.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	John F. Park.	
Farmerville.....	Union.....	117	24	52.7d	— 4.1	80	17	28	12												

TABLE 1.—*Climatological data for March, 1912. District No. 7—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Sky.	Prevailing wind direction.	Observers.			
				Mean.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<i>Louisiana—Continued.</i>																			
Logansport.	De Soto.	192	8							7.88	1.71	0	10	6	2	23	n.	Bettie M. Dennis.	
Melville.	St. Mary.	45	24	57.3	-4.3	88	21	32	16	41*	5.92	+0.81	1.72	0	10	7	7	e.	Charles B. McNeill.
Merryville.	Calcasieu.																	A. P. Windham.	
Minden.	Webster.	194	24	49.7	-7.8	82	18†	27	13†	49	11.22	+6.91	2.30	0	16	4	7	20	Ethel Fort.
Monroe.	Ouachita.	82	24	51.8	-7.1	82	18	33	13†	42	10.35	+5.22	1.50	0	14	2	19	s.	L. L. Smith.
Morgan City.	St. Mary.	14	6								5.91		3.04	0	8	4	3	24	Virgil E. Kinsey.
Newellton.	Tensas.	5	54.1															John D. Fultz.	
New Iberia.	Iberia.	15	24	62.0b	-1.5	81	21†	39	16†	28b	3.47	-0.06	1.35	0	6	8	13	10	Mrs. John A. Gobert.
New Orleans (1).	Orleans.	51	41	60.9	-1.1	85	21	39	10	25	10.81	+5.51	4.29	0	10	3	13	15	U. S. Weather Bureau.
New Orleans (2).	do.	18	24	62.1	-0.7	87	21†	39	10	34	9.72	+5.06	3.61	0	9	5	12	14	Sugar Experiment Station.
Opelousas.	St. Landry.	83	20	57.4	-5.2	87	21	34	16†	42	3.95	-0.99	2.06	0	10	4	4	23	Andrew Moresi.
Paradis.	St. Charles.	1								8.46			2.90	0	8				Louisiana Meadows Co.
Pearl River.	St. Tammany.	29	6							9.38			2.50	0	12	10	8	13	George F. Bancks.
Plain Dealing.	Bossier.	248	20	50.7	-7.3	83	19	27	13†	37†	12.04	+7.91	5.30	0	13	5	4	22	Leon Sanders.
Rayne.	Arcadia.	44	20	58.6	-4.3	83	18	35	25	32	4.60	+0.42	1.50	0	10	7	2	22	A. P. McNeill.
Reserve.	St. John Baptist.	11	60.0	-2.7	87	21	38	10	38	8.40	+4.62	2.99	0	6	9	14	8	Leon Godchaux Co., Ltd.	
Robeline.	Natchitoches.	147	16	52.2	-7.5	83	22	28	13†	42	9.95	+5.56	1.98	0	11	9	11	11	Ruby McCook.
Ruston.	Lincoln.	312	17							8.80	+3.06	3.00	0	7				R. A. Clampet.	
St. Francisville.	West Feliciana.	115	9	56.4		82	20	34	10†	44	7.21		2.15	0	8	8	10	13	L. P. Kilbourne.
Schreiber.	Terrebonne.	17	20	63.3	-0.4	88	17	35	1	504	8.19	+4.52	4.84	0	5	10	8	13	Harriet F. Riviere.
Shreveport.	Caddo.	249	41	51.6	-6.6	82	19	31	15	34	9.93	+5.41	1.89	0	15	4	5	22	U. S. Weather Bureau.
Simmesport.	Avoyelles.	42	6							6.31			1.67	0	12	2	3	26	C. T. Leigh.
Southern University Farm.	Jefferson.	15								8.46	+4.51	2.43	0	8	13	9	9	se.	F. L. St. Martin.
Sugartown.	Calcasieu.	19	56.8	-4.3	78	18	31	25	37	6.28	+1.63	1.17	0	9	6	17	8	G. W. Richardson.	
Tallulah.	Madison.	91	5	51.6		82	21	32	10	36*	8.93		2.16	0	13				Neal T. Halt.
Walker.	Livingston.	2	59.8		85	20†	36	12†	38*	8.62		3.20	0	7	10	12	9	H. C. Fondren.	
Wimnboro.	Franklin.	57																J. C. Carlton.	

\*, †, ‡, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for March, 1912. District No. 7, Lower Mississippi Valley.*

Stations.	Watershed.	Day of month.																														Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<i>Colorado.</i>																																
Buena Vista.....	Arkansas.....	.07	.03	.15	.15	T.	.05	T.	.08	T.	T.	.03	T.	T.	T.	T.	.03	.07	T.	.07	T.	.30	0.97									
Cathalan.....	Big Sandy.....	.20	T.	.05	.15	T.	.05	T.	.04	T.	T.	.08	T.	T.	T.	T.	.34	.05	T.	T.	T.	T.	T.	.85								
Canon City [1].....	Arkansas.....	.50	T.	.13	.04	.18	.04	T.	.16	T.	.50	.11	T.	T.	T.	T.	T.	1.57														
Colorado Springs.....	Fountain.....	T.	.24	.12	.04	T.	.16	T.	.02	.02	T.	.28	T.	T.	T.	T.	.17	.22	T.	T.	T.	T.	T.	0.77								
Cripple Creek.....	Oil Creek.....	.27	T.	T.	.16	.01	T.	.06	.06	.02	.08	T.	.03	T.	T.	T.	.01	.22	.02	T.	.21	T.	T.	T.	T.	T.	.81					
Cuchara Camps.....	Cucharas.....	.39	.16	.11	.17	.06	.07	T.	.03	T.	.19	.07	.21	.78	.39	4.88																
Eads.....	Big Sandy.....	.05	.40	.30	.33	.17	.17	T.	.35	.91	T.	.22	.28	.42	.07	T.	.22	.28	.42	.07	T.	T.	T.	T.	T.	T.	.70					
Fairview.....	St. Charles.....	.05	.15	.27	.14	.24	.31	.33	T.	.17	T.	T.	T.	T.	T.	T.	.22	.28	.42	.07	T.	T.	T.	T.	T.	T.	.56					
Fremont Exp. Sta. [1].....	Fountain.....	T.	.30	.11	.14	.12	.04	.16	.02	.20	.10	.04	.10	.05	.06	.05	.15	.18	.42	.20	.09	T.	T.	T.	T.	T.	T.	3.07				
Garfield.....	Little Arka's.....	.07	.05	.10	T.	.06	T.	.07	T.	.10	.23	.44	.55	.81	T.	T.	.07	.19	.31	.40	T.	T.	T.	T.	T.	T.	0.48					
Hamps.....	Big Sandy.....	.07	.05	.33	.43	.46	.32	.72	T.	.10	T.	.10	.10	T.	T.	T.	.13	.19	.31	.40	T.	T.	T.	T.	T.	T.	9.31					
Hermit Lake.....	Grape Creek.....	.05	.05	.33	.43	.46	.32	.72	T.	.10	T.	.10	.10	T.	T.	T.	.10	.10	.10	T.	T.	T.	T.	T.	T.	0.85						
Hoehne (near).....	Purgatoire.....	.15	.12	.12	.08	T.	.10	T.	.10	T.	.10	.10	.10	T.	T.	T.	T.	T.	T.	0.43												
Holly.....	Arkansas.....	T.	T.	.05	T.	T.	.05	T.	T.	T.	T.	.38	T.	T.	T.	T.	T.	.02	T.	T.	T.	T.	T.	T.	0.65							
La Junta.....	do.....	.08	T.	T.	.05	.50	T.	.08	T.	.18	T.	.06	T.	T.	T.	T.	T.	0.91														
Lake Moraine.....	Fountain.....	T.	.22	.07	.02	.05	.03	.09	T.	T.	T.	.09	T.	T.	T.	T.	.10	.20	T.	T.	T.	T.	T.	T.	1.20							
Lamar.....	Arkansas.....	.29	.30	.05	.10	.05	.20	T.	.10	.20	T.	T.	T.	T.	T.	T.	1.01															
Las Animas.....	do.....	.12	.05	T.	.15	.12	.09	T.	.15	T.	.12	.08	T.	T.	T.	T.	T.	T.	2.85													
La Veta Pass.....	Cucharas.....	.56	T.	T.	.16	.12	.04	.03	T.	.28	T.	T.	T.	T.	T.	T.	.16	.35	T.	.15	T.	T.	T.	T.	T.	1.92						
Leadville.....	Arkansas.....	T.	.21	.14	.08	.10	.03	.16	.12	.04	.03	.04	.07	T.	T.	T.	.16	.35	.02	.01	.02	T.	T.	T.	T.	T.	T.	0.60				
Limon (near).....	Big Sandy.....	.50	T.	T.	.08	.01	.01	.01	T.	.01	T.	.05	.02	T.	T.	T.	.10	.02	*.	.16	T.	T.	.10	.04	T.	T.	0.90					
Madrid.....	Purgatoire.....	.11	.08	.01	.01	.08	T.	.08	T.	.26	.19	.37	.27	.18	.09	T.	T.	.02	.05	T.	T.	T.	T.	T.	T.	0.53						
Manitou.....	Arkansas.....	T.	.25	.13	.28	.28	T.	.27	T.	.16	.35	T.	.17	T.	T.	T.	T.	T.	2.71													
Marshall Pass.....	do.....	.28	.28	T.	.27	T.	.26	T.	.26	T.	.27	.18	.09	T.	T.	T.	.18	.30	.02	.01	.02	T.	T.	T.	T.	T.	T.	0.30				
Monument.....	Fountain.....	.10	T.	T.	.10	T.	.10	.34	T.	*.	*.	*.	*.	*.	*.	2.69																
North Lake.....	Purgatoire.....	.15	.46	.08	.19	.16	.10	.10	.11	.11	.05	T.	.17	.28	.30	.10	.10	.10	.10	.10	.10	T.	T.	T.	T.	T.	T.	1.82				
Oro.....	Arkansas.....	.18	.07	.06	.40	.03	.19	.16	*.	*.	*.	*.	.04	.05	T.	.10	.10	.10	.10	.10	T.	T.	T.	T.	T.	T.	0.53					
Pueblo.....	do.....	.06	.01	T.	.06	T.	.10	.15	T.	.10	.02	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	0.53										
Rocky Ford (near).....	Chalk Creek.....	.07	.56	.30	.27	.04	.18	.03	.20	.14	.21	.14	T.	T.	T.	.24	.42	.14	.14	.20	T.	.06	T.	T.	T.	T.	3.74					
St. Elmo.....	Arkansas.....	.10	T.	T.	.25	T.	.16	.07	T.	T.	.05	T.	T.	T.	T.	T.	T.	0.71														
Salida [1].....	Santa Clara.....	T.	.08	.18	.08	T.	.02	.09	T.	.04	T.	.03	T.	T.	T.	.16	.07	.08	T.	T.	T.	T.	T.	T.	1.46							
Sheridan Lake.....	Arkansas.....	.05	.31	.28	T.	T.	.27	T.	T.	T.	.05	T.	T.	T.	T.	.06	.06	T.	T.	T.	T.	T.	T.	T.	T.	T.	2.20					
Stonewall.....	Purgatoire.....	.15	.22	.08	T.	T.	.20	T.	T.	T.	.05	T.	T.	T.	T.	.06	.06	T.	T.	T.	T.	T.	T.	T.	T.	T.	1.28					
Trinidad.....	do.....	.20	.06	.03	.01	.04	T.	.06	.05	T.	.03	.03	T.	T.	T.	.01	.28	.02	T.	.01	T.	T.	T.	T.	T.	1.09						
Two Buttes.....	Arkansas.....	T.	.15	T.	T.	.10	T.	.10	.02	T.	T.	.67	T.	T.	T.	.27	T.	.30	T.	.01	T.	T.	T.	T.	T.	2.02						
Victor (near).....	Oil Creek.....	.16	T.	T.	.16	T.	T.	.02	T.	T.	T.	.22	T.	T.	T.	T.	.14	.07	T.	T.	T.	T.	T.	T.	0.75							
Villas.....	Cimarron.....	T.	T.	.15	T.	T.	.10	T.	T.	T.	.10	.10	T.	T.	T.	T.	.08	T.	T.	T.	T.	T.	T.	T.	T.	T.	0.33					
Wayne.....	Arkansas.....	.28	T.	T.	.25	.14	T.	.03	T.	.02	.27	T.	.12	T.	.15	T.	T.	T.	T.	T.	1.47											
Westcliffe.....	Grape Creek.....	.28	T.	T.	.25	.14	T.	.03	T.	.02	.27	T.	.12	T.	.15	T.	T.	T.	T.	T.	2.61											
Winfield.....	Clear Creek.....	.08	.10	.09	.16	.01	.36	.02	.21	T.	.18	.04	T.	.15	T.	.08	.01	T.	.30	.26	.20	.07	.08	.02	T.	.01	T.	2.61				
Woodman Sanat'm.....	Fountain.....	T.	.18	.10	T.	.12	.10	T.	.21	T.	.35	.30	T.	T.	.15	T.	.20	T.	.10	.30	.10	T.	T.	T.	T.	T.	T.	0.28				
Wortman.....	Arkansas.....	T.	.60	T.	T.	.12	.10	T.	.21	T.	.35	.30	T.	T.	.15	T.	.20	T.	.10	.30	.10	T.	T.	T.	T.	T.	T.	3.13				
<i>New Mexico.</i>																																
Abbott.....	Canadian.....	.08	T.	.04	T.	.49	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	T.	0.61														
Albert.....	do.....	.50	T.	T.	.36	T.	.04	T.	.04	T.	.08	.11	.07	T.	T.	T.	.04	.33	T.	.18	.02	T.	.56	2.25								
Aurora.....	do.....	.42	T.	T.	.36	T.	.04	T.	.04	T.	.22	T.	T.	T.	T.	T.	.06	T.	.06	T.	.02	T.	T.	T.	T.	T.	T.	0.37				
Bell Ranch.....	do.....	.34	T.	.24	T.	.18	T.	.06	T.	.12	T.	T.	T.	T.	T.	T.	1.14															
Black Lake.....	do.....	T.	.34	T.	.24	T.	.08	T.	.08	T.	T.	T.	T.	T.	T.	T.	T.	T.	0.08													
Cabeza.....	do.....	T.	.05	T.	T.	T.	T.	.18	T.	.07	.27	T.	.20	.02	T.	.01	.05	.12	.38	T.	3.28											
Campana.....	do.....	.36	T.	T.	.20	T.	.20	T.	.07	.27	T.	.20	.02	T.	.01	.05	.12	.33	T.	1.97												
Chacon.....	do.....	.36	T.	.13	T.	.08	T.	.07	.27	T.	.20	.02	T.	.01	.05	.10	.24	T.	4.00													
Cimarron (near).....	do.....	.24	T.	.13	T.	.08	T.	.07	.27	T.	.20	.02	T.	.01	.05	.10	.20	T.	1.97													
Clayton.....	do.....	T.	.05	T.	.04	T.	.04	T.	.04	T.	.04	T.	T.	T.	T.	T.	.18	T.	.09	T.	T.	T.	T.	T.	T.	0.38						
Clovis.....	Red.....	T.	.10	.08	T.	.02	T.	.04	T.	.04	T.	.04	T.	T.	T.	T.	.25	T.	.09	T.	T.	T.	T.	T.	T.	0.11						
Cuervo.....	Canadian.....	T.	.22	.73	.53	.07	.05	.10	.06	.06	.08	T.	T.	T.	T.	.25	.18	T.	.05	.05	T.	T.	T.	T.	T.	T.	1.08					
Dawson.....	do.....	.16	T.	.02	T.	T.	T.	T.	.25	.18	T.	.05	.05	T.	T.	T.	T.	T.	T.	3.36												
Elizabethtown.....	do.....	T.	.12	.04	T.	T.	T.	T.	.25	.18	T.	.05	.05	T.	T.																	

TABLE 2.—*Daily precipitation for March, 1912. District No. 7—Continued.*

Stations.	Watershed.	Day of month.																														Total.				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Texas.</i>																																				
Amarillo.	Canadian.	.02	.03	.02	.01	T.	.02	.01			.13		T.									T.	.05	.03	.27				T.	.16	.35		.26	0.82		
Archer City.	Red.	T.	T.	T.	.52	.12	T.	.02			.25											T.	.05	.26	.11	.25							.02	1.61		
Arthur City.	do.			.29	.09	.75	.80			.11																								5.00		
Bonham.	do.																																			5.81
Canadian.	Canadian.	.30																																		2.68
Childress.	Red.																																			2.55
Chillicothe.	do.			.19		.50	.02																												3.22	
Clarendon.	do.	T.	.65	T.	T.					T.	T.																								1.00	
Clarksville.	do.					1.60				T.	.20																								0.15	
Claude.	do.			T.																																0.38
Dalhart.	Canadian.	T.		T.	T.				T.	T.	T.																								5.26	
Denison.	Red.					.30	1.93			.15																								5.26		
Finley.	do.					.84	1.00			.25	T.	.23																					4.83			
Henrietta.	do.	T.	T.	T.	.90				T.			.20																						3.00		
Hereford.	do.																																			0.15
Memphis.	do.																																			0.90
Miami.	Canadian.	T.	.22	T.	.65				T.	T.		.07																						1.20		
Mobeetie.	Red.																																			0.90
Ochiltree.	Canadian.	.02	.16																																1.00	
Panhandle.	do.	.10	.10																																2.00	
Paris.	Red.	.04	.53	T.	1.00	.02	.02	.12			.32	T.																					5.91			
Plemons.	Canadian.	T.	.20	T.	.05	T.	T.			T.	T.	.02																					1.06			
Quanah.	Red.	.10	.40																																2.35	
Ringo Crossing.	do.			.53		.70			T.	T.		.01																						5.73		
Romero.	Canadian.					.50																													0.81	
Sherman.	Red.	.30	.63	.12																															5.82	
Stratford.	Canadian.	T.	.13		.05	.07																												1.17		
Texline.	do.			.10		.10																													0.70	
Tulia.	Red.	.27	.33																																1.15	
Wichita Falls.	do.	.05	.01	.79																															3.19	
Winfield.	do.	.45		1.03	T.																														5.71	
<i>Kansas.</i>																																				
Alden.	Arkansas.	.52																																		1.21
Anthony.	do.	T.	.33	T.	.10				T.	T.		.10	.06																						1.75	
Ashland.	Cimarron.	.35	.01			.05	.08			.10	.01			T.																				1.17		
Burlington.	Neosho.	.68	T.	T.																															5.32	
Chanute.	do.	1.50																																		9.15
Cimarron.	Cimarron.	T.	.10	.02	T.	T.	T.	T.																										1.18		
Coldwater.	do.	T.	.30	T.	T.	T.	T.																											0.96		
Columbus.	Neosho.	.60		.25		T.	.04	T.																										5.99		
Coolidge.	Arkansas.																																		0.26	
Cottonwood Falls.	Neosho.	.50		T.	T.																														3.73	
Council Grove.	do.	.61																																	2.15	
Cunningham.	Arkansas.	.45																																	1.82	
Dodge City.	do.	.10	.05			.01	.01																										0.97			
El Dorado.	do.	.40				.02																												3.41		
Ellinwood.	do.	T.	.54		T.																														1.60	
Emporia.	Neosho.	.50		T.																															3.44	
Eureka.	Verdigris.	.55		T.																															3.98	
Fall River.	do.	.60		.15	.05																													4.45		
Fargo.	Cimarron.	T.	T.	T.	T.	.05	T.																											0.60		
Fredonia.	Verdigris.	.35	T.	.10	.09																													2.74		
Garden City.	Arkansas.	T.	.10	T.	.10	T.	.03	T.																									0.98			
Great Bend.	do.			.20																															2.19	
Greensburg.	do.	T.	.80	T.	T.	T.	T.	T.																										1.24		
Grenola.	Verdigris.	.15				.07	T.	.05	T.																								2.49			
Hess.	Cimarron.	T.	.06																															0.70		
Howard.	Verdigris.	.30		T.																															2.85	
Hugoton.	Cimarron.	.05																																	0.83	
Hutchinson.	Arkansas.																																			

TABLE 2.—*Daily precipitation for March, 1912. District No. 7—Continued.*

TABLE 2.—*Daily precipitation for March, 1912. District No. 7—Continued.*

TABLE 2.—*Daily precipitation for March, 1912. District No. 7—Continued.*

\* Precipitation included in that of the next measurement.

Separate dates of falls not recorded.

Precipitation for the 24 hours ending on the morning when it is measured.  
Precipitation is less than 0.01 inch rain or melted snow.

1. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures at selected stations for March, 1912. District No. 7, Lower Mississippi Valley.

Date.	Colorado.				New Mexico.				Texas.				Kansas.								Oklahoma.								
	Lamar.		Leadville.		Pueblo.		Albert.		Cimarron.		Amarillo.		Paris.		Dodge City.		Ellsworth.		Iola.		Liberal.		Wichita.		Ardmore.		Bartlesville.		
	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	
1....	25	11	37	10	26	16	37	24	41	10	81	24	40	33	27	21	16	32	16	30	17	27	23	30	20	39	37	35	22
2....	35	17	33	15	55	5	55	27	50	19	48	30	44	34	30	18	28	23	30	21	40	23	32	22	42	35	33	27	27
3....	27	18	27	13	54	21	55	20	54	28	53	34	22	14	24	14	22	11	31	17	34	17	27	15	44	36	32	23	23
4....	30	18	32	12	26	17	45	20	55	25	55	20	57	41	21	15	22	17	31	18	24	13	27	19	40	38	33	28	28
5....	27	14	43	9	24	7	31	19	28	17	28	16	38	36	24	14	28	15	30	14	28	14	26	16	38	29	32	20	20
6....	37	18	37	16	54	19	64	129	55	20	65	28	43	32	30	17	31	9	36	10	40	23	33	15	49	26	34	18	18
7....	32	26	43	14	31	24	45	24	56	31	49	29	48	34	30	22	33	28	36	33	33	26	35	29	47	30	37	32	32
8....	27	13	38	10	24	13	41	21	37	21	29	19	41	38	22	7	30	15	33	18	29	14	32	15	37	35	32	29	29
9....	33	14	41	8	27	1	39	20	32	20	37	18	48	28	22	2	26	2	30	12	29	13	31	9	42	24	34	17	17
10....	37	26	44	19	39	21	38	22	46	27	37	28	47	27	34	21	32	20	33	21	36	26	34	23	43	24	35	25	25
11....	35	20	30	18	38	29	49	31	49	32	42	28	70	39	36	24	35	26	37	28	35	29	41	27	64	35	52	35	35
12....	35	18	32	10	35	28	51	30	45	23	45	23	46	35	30	16	30	20	35	24	35	20	33	24	59	32	49	28	28
13....	46	25	34	13	34	28	56	33	45	24	56	28	53	29	36	20	35	17	41	22	47	26	41	20	54	34	44	25	25
14....	35	14	22	6	32	16	48	30	35	19	45	21	30	37	11	35	17	50	26	41	20	43	20	54	43	54	24	24	
15....	41	10	30	0	56	16	48	28	54	8	56	19	51	27	42	7	39	5	38	20	53	15	40	15	52	24	44	23	23
16....	62	27	30	8	60	25	49	29	59	31	71	29	66	27	56	28	55	27	57	31	70	32	61	31	66	33	62	29	29
17....	50	29	33	4	57	35	51	23	56	27	65	39	74	31	48	34	51	35	56	38	60	33	55	39	77	50	68	40	40
18....	68	29	41	13	69	35	63	25	66	30	80	40	80	44	66	34	66	31	70	33	74	33	69	36	85	47	75	38	38
19....	68	35	42	22	70	38	54	33	66	47	81	48	83	48	63	37	64	37	70	45	78	33	70	43	90	48	79	38	38
20....	58	16	38	21	42	18	76	27	58	30	70	13	85	58	37	13	51	21	45	27	67	22	43	22	75	56	67	30	30
Mns..	45.3	22.1	36.1	11.1	44.4	22.4	52.4	26.1	50.1	23.0	51.6	26.9	57.0	36.0	39.3	21.8	41.1	22.0	42.9	25.7	46.5	23.9	41.9	25.3	54.7	36.8	49.5	30.7	30.7

Date.	Oklahoma.								Missouri.								Lynnville, Ky.								Jackson, Tenn.			
	Enid.		McAlester.		Mangum.		Muskogee.		Oklahoma.		Weatherford.		Woodward.		Caruthersville.		Ironton.		Lamar.		Olden.		Springfield.					
	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.	Max.	Mn.
1....	32	20	42	29	51	28	40	25	35	29	34	24	29	19	42	24	34	10	32	7	35	15	30	14	40	24	41	28
2....	35	26	43	35	50	30	37	34	39	33	34	29	35	29	37	28	39	21	36	20	42	25	37	22	41	31	41	35
3....	37	26	43	35	40	33	42	32	37	29	32	28	34	21	38	33	39	19	34	22	41	22	35	26	44	35	42	32
4....	29	25	44	35	33	32	40	32	32	28	30	27	28	23	42	32	38	19	34	22	41	22	35	26	44	35	42	32
5....	35	19	36	26	34	22	36	26	28	20	33	20	33	18	37	30	34	21	35	19	35	21	29	19	42	32	42	32
6....	34	19	39	29	41	29	39	32	34	24	34	21	33	19	48	28	46	10	40	16	41	18	36	17	41	32	42	30
7....	35	23	44	38	36	32	40	35	34	32	35	25	33	30	42	36	40	29	38	19	42	33	41	33	42	30	40	30
8....	41	25	42	30	35	28	39	29	34	23	33	26	33	19	45	37	38	32	31	31	41	32	36	21	50	40	48	38
9....	36	28	43	23	40	18	42	22	35	19	41	16	35	10	48	36	36	10	35	18	36	18	29	19	42	32	48	28
10....	39	29	45	31	43	19	42	28	41	31	43	21	37	28	42	24	36	10	35	18	36	18	29	19	42	32	48	28
11....	41	26	43	34	52	27	50	35	54	32	51	32	40	32	45	33	35	26	37	20	34	28	36	29	46	29	47	39
12....	42	29	53	32	53	30	50	30	37	30	47	28	40	25	45	37	34	22	36	26	34	31	36	25	55	32	47	32
13....	51	28	57	26	57	28	55	27	51	30	54	29	52	28	63	26	49	19	45	22	48	17	44	20	55	32	47	32
14....	41	29	56	45	45	30	56	40	48	20	43	29	44	25	49	34	34	26	42	23	42	34	43	30	57	34	47	39
15....	50	19	49	27	56	20	47	27	46	21	54	19	54	11	48	36	40	27	42	23	43	26	43	23	57	34	47	39
16....	55	20	65	29	73	30	62	32	64	33	69	21	68	41	69	28	55	18	59	23	55	24	57	29	58	27	59	34
17....	61	28	74	49	76	36	68	44	66	48	69	41	62	34	79	34	68	37	65	35	67	35	62	40	69	34	74	34
18....	76	34	83	48	87	33	82	45	78	43	87	37	78	40	85	46	70	27	77	35	73	34	74	37	77	34	80	55
19....	76	38	88	60	87	44	86	58	86	55	96	49	80	46	88	55	81	38	72	42	82							

TABLE 3.—Maximum and minimum temperatures at selected stations for March, 1912. District No. 7—Continued.

Date.	Tennessee.				Arkansas.												Mississippi.				Clarksville.		Cerinth.		Greenville.			
	Kenton.		Memphis.		Bentonville.		Corning.		Dardanelle.		El Dorado.		Fort Smith.		Little Rock.		Pine Bluff.		Texarkana.		Wynne.		Clarksville.		Cerinth.		Greenville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	38	23	40	26	32	20	.....	.....	39	25	48	33	37	29	40	27	45	28	50	32	37	34	45	26	44	24	51	28
2.....	35	26	46	31	34	30	.....	.....	41	29	59	35	36	33	43	33	52	30	48	34	40	31	54	28	66	24	60	31
3.....	38	27	40	33	34	29	.....	.....	50	34	57	40	48	34	47	33	48	37	55	37	37	32	47	36	52	30	52	40
4.....	40	31	46	36	35	31	.....	.....	41	38	57	42	46	37	43	35	49	30	57	40	37	35	56	38	56	39	62	45
5.....	39	30	38	30	34	24	.....	.....	37	35	38	36	37	35	35	32	36	34	55	36	34	32	37	38	38	41	40	40
6.....	41	28	42	30	37	22	.....	.....	41	34	46	34	42	35	41	31	44	32	45	35	45	30	46	33	48	32	46	34
7.....	48	33	48	38	40	34	.....	.....	44	35	50	38	43	38	50	38	51	36	47	36	52	34	50	33	50	34	51	35
8.....	47	37	45	37	38	25	.....	.....	45	38	50	41	43	33	46	37	51	43	50	40	43	40	50	38	44	31	43	
9.....	38	28	38	31	45	18	.....	.....	46	31	44	36	46	26	43	30	50	34	49	33	40	36	42	35	42	32	42	38
10.....	38	23	38	28	37	24	.....	.....	43	30	49	34	41	33	38	31	40	33	48	35	36	27	40	30	45	24	45	31
11.....	45	33	47	36	43	32	.....	.....	44	32	53	38	44	32	47	33	47	34	58	37	45	33	48	30	50	26	50	34
12.....	46	43	46	36	36	27	.....	.....	41	37	47	40	40	32	45	37	47	40	47	37	43	42	45	38	50	38	47	45
13.....	52	30	51	32	53	23	.....	.....	55	27	55	29	56	30	50	32	52	30	52	26	53	29	52	34	54	34	54	34
14.....	47	34	47	44	51	27	.....	.....	47	41	50	44	49	31	49	43	48	40	53	33	45	37	47	34	48	34	51	37
15.....	46	36	45	35	43	24	.....	.....	48	32	52	30	48	28	47	32	50	32	54	29	46	34	47	35	40	36	51	35
16.....	60	44	56	35	57	28	.....	.....	61	26	52	30	62	30	58	33	63	29	60	30	54	28	58	29	60	26	61	30
17.....	67	34	68	46	64	45	.....	.....	79	34	74	40	65	45	70	44	73	39	67	36	67	39	70	32	68	30	70	35
18.....	72	41	75	52	78	42	.....	.....	81	45	80	46	82	48	78	53	80	46	79	45	71	43	80	47	78	42	79	48
19.....	79	53	78	60	81	58	.....	.....	80	51	80	48	82	57	79	58	81	58	83	49	84	55	80	47	79	48	82	54
20.....	74	54	75	63	68	38	.....	.....	73	55	79	62	74	54	78	62	80	60	81	50	75	59	61	74	56	76	61	
Mns.	53.2	35.3	52.7	39.5	49.5	32.2	.....	.....	54.6	36.8	57.3	36.3	53.3	37.3	54.1	39.1	56.6	38.8	58.2	38.6	50.9	38.5	55.9	38.4	56.6	36.4	58.3	40.5

Date.	Mississippi.						Louisiana.												Shreveport.											
	Kosciusko.		Natchez.		Vicksburg.		Alexandria.		Baton Rouge.		Covington.		Lafayette.		Lake Charles.		Monroe.		New Orleans.		Robeline.		Schriever.		Shreveport.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1.....	51	28	57	36	54	34	60	39	63	40	64	43	62	44	63	41	59	35	59	46	80	37	77	35	46	35				
2.....	64	29	68	36	66	39	69	39	66	41	69	40	71	43	80	40	66	36	64	40	77	39	61	40	58	49				
3.....	66	36	72	52	68	51	75	40	80	55	81	41	77	46	79	40	67	42	76	59	72	48	77	47	51	48				
4.....	68	47	72	52	62	50	75	56	76	59	76	69	59	80	80	39	67	60	64	70	51	75	45	63	50	50				
5.....	51	48	62	55	58	36	60	55	65	57	74	58	65	60	81	40	43	72	49	63	41	44	53	38	44	38				
6.....	49	36	47	37	47	35	45	38	50	40	58	44	46	41	60	39	47	35	54	46	50	37	46	36	46	36				
7.....	53	36	62	36	53	44	60	37	60	46	68	44	72	41	70	35	53	36	67	52	59	41	50	41	51	40				
8.....	59	47	67	57	48	58	46	60	42	65	48	70	52	67	46	70	37	56	42	72	58	53	42	84	40	51	38			
9.....	40	37	57	40	46	37	50	45	52	44	61	49	55	47	55	40	49	40	62	44	50	37	82	39	44	38				
10.....	50	28	57	35	54	34	58	37	60	39	63	37	64	37	54	34	59	36	56	39	40	36	82	38	52	37				
11.....	51	39	55	38	52	42	55	39	61	47	59	39	67	38	70	44	52	40	67	48	52	34	71	37	62	42				
12.....	51	40	57	40	51	41	56	45	64	50	71	49	67	52	60	40	49	42	69	45	54	32	72	44	52	38				
13.....	55	34	62	34	57	36	60	35	62	37	65	35	61	31	65	30	58	33	61	44	58	28	79	37	54	34				
14.....	61	37	69	40	65	49	70	35	72	53	72	36	70	39	70	35	66	33	77	52	61	28	79	47	55	45				
15.....	45	41	54	39	50	38	50	39	67	46	63	51	56	47	61	40	55	34	62	58	33	80	49	51	31					
16.....	62	28	65	34	62	37	65	32	71	37	67	80	35	70	32	65	33	60	42	60	35	82	40	62	34					
17.....	72	32	75	39	70	43	75	33	75	50	73	38	81	52	78	40	76	44	78	40	88	38	74	44						
18.....	79	42	80	50	77	55	80	50	80	57	83	46	81	59	79	43	82	48	78	58	63	45	86	55	80					
19.....	80	45	79	60	75	61	80	57	77	60	81	54	77	59	75	44	79	47	81	60	64	53	86	64	82					
20.....	75	58	78	65	74	63	75	65	79	61	80	59	84	62	76	57	76	61	80	66	68	55	85	60	86					
21.....	82	59	84	62	80	47	80	60	82	64	84	66	85	63	82	58	81	60	85	66	75	56	83	60	84	40				
22.....	50	37	59	44	47	42																								